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AUTHOR Stecher, Judith S.
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ABSTRACT

Teacher verbal mediation which might be associated with children's elaborated-restricted code use was described in 20 early childhood classrooms. Three teacher mediation patterns were identified. Data collected by RELAB, an instrument derived from Bernstein's coding categories, recorded 4,135 child statements, eight classroom contexts and eight child variables. Correlational tests, factorial analysis of variance and contrast vector tests indicated that: (1) teacher mediation scores were strongly associated with child code use (.01); (2) teacher mediation patterns were significantly different from each other (.01). Findings support Bernstein but differ from Gahagans' conclusion of no-difference in teacher verbal mediation. The discovery that SES was the child characteristic most strongly associated with children's coding shift strongly supports Bernstein's identification of the mediating role of the adult in transmission of speech codes. (Author)

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Remembrance of Past Research, paper presented to AERA, San Francisco, 1976.

"A Description of Teacher Verbal Mediation and of Children's Verbal Coding in Selected Early Childhood Classrooms.

Judith S. Stecher, Ed. D.
Professor, Queens College, CUNY

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Remembrance of research past is always a somewhat painful process. If one knew then. . .another statistical method, a larger sample perhaps. . .the list of possibilities unexplored has no limit. Happily, Dunkin and Biddle's (1974) publication of The analysis of teaching provided a model that can be applied to "A Description of Teacher Verbal Mediation and of Children's Verbal Coding in Selected Early Childhood Classrooms", a field exploration completed in 1974. Teacher's verbal mediation was the independent variable and children's classroom performance of speech coding was the dependent variable. The presage variable was mediating talk, the contexts were grouping, curriculum, child characteristics, classroom conditions and teaching style. The product was child talk, classified as elaborated or restricted coding.(See page 2)

The research impetus was derived from two sources: The first was the sociolinguistic studies of Basil Bernstein (1958, 1970, 1972, 1974). He identified maternal talk as one context for children's verbal coding. A subsequent study of children's school talk by his colleagues, the Gahagans (1970), related school language both to maternal mediation and to a new language program but omitted any description of teacher talk as a probable context for children's verbal coding performance in school. This research, in an attempt to extend Bernstein's sociolinguistic research, explored the association of teacher verbal mediation as a context for children's coding.

The second theoretical basis comes from the body of class-

PRESAGE VARIABLES

3 female primary teachers, NYS certified
selected from pool of 20

CONTEXT VARIABLES

75 pupils

SES
25 low
48 middle

AGE
5's - 6
6's - 15
*7's - 44

Birth order
1-38
2-16
3-20

Sex
57 female
18 male

Reading Scores
below grade 37
on or above 38

3 urban classrooms
2 public, 1 independent
25 each class
1 other adult, each class
similar selection of
texts, trade books, toys
and games in classroom
II & III
similar choices of materials
in classrooms I & II
(classroom I & II "Open"
classroom III "Traditional")
movies, slides, cameras used
regularly in classes.
different use of space
parent choice of child's
classroom placement

classroom contexts

*8's-6

PROCESS VARIABLES

3 classrooms observed 58 hours
live recording of child and of
teacher talk.
Groupings: T:under 5 children;
T:under 10; T:whole class.
Curr: Academic; Art; class dis-
cussion; free play.
Mediation scores; Teachers
Elab Scores: 75 children

PRODUCT VARIABLES

Immediate Pupil Growth
-More mediation associated with more child talk (elab. & restricted)
-More T. mediation associated with coding shifts
-More lower SES children used elab coding in higher mediating T classrooms.
-No difference in middleclass elab coding in 3 classrooms
-Teacher mediation was most strongly related to elab coding
-Elab coding was associated with higher reading scores

Long-Term Pupil Growth
-Social, psychological and educational implications of communication competence

A Model for the Study of Classroom Teaching
Dunkin and Biddle (1974) p. 38.

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room interaction material which most certainly provided choices from a multitude of instruments. A synthesis of a small portion of Bernstein's sociolinguistic studies with a category system from classroom interaction studies enabled the researcher to describe the verbal behaviors of children and teachers in early childhood classrooms.

Teacher verbal behavior was described using six categories chosen from Flanders (1970) and subsequently modified by Amidon and Hunter (1967) and by Hough (1967). They are:

T	1.	Identifies, expresses feeling (affect)
	2.	Acknowledges and/or praises learner or learner's work
E		
	High	a. Identifies criteria for praise of acknowledgment
A	Medi-	
		b. Does not identify criteria
C	ating	
	3.	Sustains, extends students' ideas by repeating, questioning, clarifying or developing
H		
	4.	Informs, lectures, presents ideas
E-		a. Uses reasons and explicit criteria
		b. Implicit. Does not give explanation or criteria
R		
	5.	Commands (Imperatives); requires one answer, one behavior
	Low	
T		
	Medi-	a. Appeals to individual
A	ating	b. Appeals to status
	6.	Rejects individual or groups as not conforming to status quo of time, place, school, teacher, age, race or other status-defined position
L		
K	7.	Other

The categories of child talk were derived from Bernstein's elaborated and restricted codes. Bernstein has maintained that restricted and elaborated speech not only have different origins but also use different principles to regulate behavior. Restricted coding was available to all speakers, elaborated coding was not. Difference in code accessibility was paralled by distinctions in the form and function of language. For example, an elaborated code user perceives language as a channel of communication and as a means of expressing information and feeling. A restricted code user perceives language primarily as an enforcement of the status quo both in terms of role and of social conformity.

Following are the six categories of child talk used in the research instrument, entitled RELAB (restricted-ELABorated code):

C		8.	Expressive statements, identifies, acknowledges self
			a. Use of "I"
H			b. Plans ahead, speculates
	Elaborated	9.	Role-taking statements indicating perception of others
I	Code		
		10.	Referential statements (uses descriptive language including one of the following: color, size, shape, texture, number, time, space).
L			a. Objects, events OUTSIDE of classroom
D			b. Objects, events WITHIN classroom
		11.	Use of "WE" to describe solidarity, kinship, family group feeling.
T			
	Restricted	12.	Pre-conceived response, prepared recitation, yes-no answers
A	Code		
		13.	Commands (Imperatives)
			a. With criteria and/or reasons
L			b. Without criteria and/or reasons
K			

The six teacher talk categories and the six child talk categories described above comprised the instrument RELAB which was field tested in five classrooms to assure that categories were mutually exclusive and could be reliably coded. (Flanders 1965) (Scott 1955)

Inter-reliability was tested twice producing reliability co-efficients of .84 and .87. The twelve RELAB categories were

judged valid by five university professors with recognized competence in either classroom interaction or linguistics.

When statistically significant relationships were examined by analyses of variance, the results demonstrated that when teacher mediation was contrasted to contexts of age, sex, color, socio-economic status and reading level, the strongest variable was teacher mediation in terms of children's elaborated coding (Tables 4 - 12). Furthermore, greater numbers of children in the classes of the higher mediating teachers not only made more elaborated communications, but also the greatest number of restricted communications. That is, high mediation was associated with both the greatest number of children talking and the higher frequency of elaborated and restricted talk in nearly every category. And most importantly, more children who could shift codes were in the classroom of the highest mediating teacher (Table 3).

The second significant finding dealing with children's coding was described when the relationship between teacher mediation and the number of children's elaborated utterances were examined in conjunction with the relationship between social class and elaborated coding, a significant interaction was obtained. In the high-mediating teachers' classrooms, the means for the low socio-economic (SES) status and middle socio-economic subjects were approximately equal, 42.65. In striking contrast, within the low-mediating teacher's classroom an

elaborated utterance mean of 13.71 was obtained for the low SES subjects and a mear of 42.55 obtained for the higher SES subjects (Table 8).

The significant relationship found between teachers' verbal mediation and the differential coding of middle-class and poor children re-enforced the main thrust of Bernstein's sociolinguistic studies. This finding, while conceptually intriguing must be tempered when the research design is analyzed from Dunkin and Biddle's perspective. This research design shared with other classroom interaction studies, a small sample, a moderate reliability co-efficient and jury evaluation of validity. Although an attempt was made to explore the complexity of classroom interaction by identification of many presage, content and product variables (see p. 2) several areas were not examined. An important omission was teachers' formative and training experiences. Moreover, there was a lack of control of child characteristics in the sample and only minimal observations of the teacher's talk to each child. Consequently, no exploration of the reverse effects of child characteristics on the teacher was undertaken.

When analysis of variance tests were administered to all six teacher talk categories, a talk pattern emerged for high-mediating teachers. It was, "Explicitness". Personal explicitness, explicitness when informing, explicitness as to rationale for obeying commands and in making appeals for conformity on personal rather than on

status bases (Table 2).

These findings not only differed from those of the Gahagans (1970) who postulated no difference in teacher mediation talk patterns but may prove useful antidotes to that frequently identified teacher behavior labelled "vagueness" by Dunkin and Biddle. The categories of teacher talk which formed the paradigm of explicitness appear to be what Dunkin and Biddle call "trainable traits" (p. 400).

The concluding ritual call for replication will be omitted in favor of using Dunkin and Biddle's model for classroom research as a linguist might use it. If, for the purpose of comparison, linguistic functions can be assigned to their four variables and each of the four can be considered a constituent phrase; then presage variables become the nominative constituent context variables are then noun and verb modifiers, process variables are verbal components and product variables are objects. Thus providing us with a new syntax for the analysis of teaching. Such an approach might help researchers articulate the deep structure and transformations embedded in classroom interaction and hopefully might even inspire a single declarative sentence which would incorporate all of Dunkin and Biddle's variables as constituent phrases. This would be a basis for the meta-language needed to interpret classroom discourse.

REFERENCES

Amidon, E.J. and Hough, J.B. (eds) Interaction analysis: theory, research and application. Addison Wesley, 1967

Bernstein, B. Some sociological determinants of perception. British Journal of Sociology, 1958, 9, 159-174.

Class Codes and Control: Theoretical studies towards a sociology of language. I. Primary socialization language and education. London: Routledge, Kegan Paul, Vol. 1, 1970, Vol. II, 1974.

A brief account of the theory of codes. Unpublished manuscript, August 1972.

Dunkin, M.J. and Biddle, B.J. The study of teaching. Holt, Rinehart, 1974.

Flanders, N. Teacher influence, pupil attitudes and achievements. U.S. Office of Education, U.S. Department of Health Education and Welfare (OEa5040), Cooperative Research Monography, No. 12, Washington, D.C., 1965.

Analyzing teacher behavior. Addison-Wesley, 1970.

Gahagan, D. and Gahagan, G. Talk reform: An exploratory language programme for infant school children. Primary socialization language and education. Vol. II, B. Bernstein (ed.), Routledge, Kegan Paul, 1970.

Scott, W.A. Reliability of content analysis: The case of nominal coding. The Public Opinion Quarterly, 1955, 19 (3) 321-325.

Stecher, J.S. A description of teachers' verbal mediation and children's verbal coding in selected early childhood classrooms. Unpublished doctoral dissertation, New York University, 1974.

Tough, J. The language of young children. Leeds, England: The University of Leeds, Institute of Education, 1973.

Table 1

CHILD CHARACTERISTICS
IN THE SELECTED
THREE CLASSROOMS

	Classroom I	Classroom II	Classroom III
READING			
On or above grade level	14	9	14
Below grade level	11	16	11
COLOR			
Non-white	1	17	13
White	24	8	12
SES			
Low	1	14	10
High	21	11	15
BIRTH ORDER			
First	13	14	11
Middle	2	8	7
Last	10	3	7
SEX			
Female	25	15	13
Male	0	10	12
AGE			
5	6		
6	15		
7	4	21	23
8		4	2

Table 2

SUMMARY RESULTS
OF ANALYSES
OF VARIANCE:
TEACHER TALK CATEGORIES

		F Ratio	Means[a]		
1	Identifies and expresses feelings	3.19*	T2 6.4	T1 4.7	T3 3.7
2A	Acknowledges and/or praises with criteria	2.18			
2B	Acknowledges and/or praises without criteria	1.04			
3	Extends student ideas	2.39			
4A	Informs with criteria	6.05**	T1 11.7	T2 11.3	T3 4.05
4B	Informs without criteria	5.02**	T2 7.41	T1 6.69	T3 2.79
5A	Commands (individual appeal)	4.08*	T2 11.6	T1 11.0	T3 5.6
5B	Commands (status appeal)	6.22**	T3 9.9	T2 5.1	T1 4.1
6A	Rejects (with criteria)	2.01			
6B	Rejects (without criteria)	1.31			
MEDIATION		29.40**	T1 .74	T2 .64	T3 .44

[a]Means were rank ordered when F ratio was significant.

Each underlining defines one subset.

TTeacher.

* $p < .05$; ** $p < .01$.

Table 3

CATEGORY USE IN TERMS OF
STATEMENTS MADE AND
NUMBER OF CHILDREN WHO TALKED

	Classroom I		Classroom II		Classroom III		All Children
	A	B	A	B	A	B	B
8A	202	25	186	23	170	21	69
8B	75	20	63	17	37	10	47
9A	177	24	177	24	124	17	65
9B	53	14	53	14	36	10	38
10A	210	25	202	24	134	16	65
10B	403	25	324	25	252	23	73
11A	87	24	66	18	54	15	57
11B	70	20	56	16	38	11	47
12	336	25	266	25	180	25	75
13A	60	18	24	21	85	9	48
13B	23	11	28	7	12	2	20
Total	1696 1696		1445		1124		

N.B. A - Number of statements made.

B - Number of children who made statements.

TABLE 4

SUMMARY RESULTS OF TWO-WAY ANALYSES OF VARIANCE

	A Analyses						B Analyses					
	Teacher Mediation		Child Characteristic		Interaction		Teacher Mediation		Child Characteristic		Interaction	
	F	p	F	p	F	p	F	p	F	p	F	p
Number of Elaborated Utterances												
M x Rd.	5.74	.02	2.10	.15	.40	.53	4.52	.04	.24	.63	1.74	.19
M x B.O.	4.86	.03	.12	.89	.08	.93	4.07	.05	.36	.71	.19	.83
M x Age	6.47	.01	.02	.89	.02	.87	1.75	.19	.08	.77	.02	.87
M x SES	6.20	.01	5.96	.02	7.35	.01	4.67	.03	6.21	.02	5.69	.02
M x Sex	6.49	.01	.04	.83	.03	.86	5.40	.02	.07	.95	.06	.81
Number of Restricted Utterances												
M x Rd.	.38	.54	.12	.73	.12	.73	1.35	.25	1.45	.23	1.43	.24
M x B.O.	.01	.94	.86	.57	.65	.53	.42	.53	.51	.61	2.23	.12
M x Age	.86	.64	.83	.63	.23	.64	.37	.56	.12	.73	.02	.88
M x SES	.55	.53	.20	.66	.77	.61	2.70	.10	.00	.96	1.44	.23
M x Sex	1.04	.31	1.39	.24	.10	.75	1.70	.20	.64	.57	.00	.97
Total Number of Utterances												
M x Rd.	2.49	.12	.93	.66	.38	.55	1.38	25	01	.94	2.03	.16
M x B.O.	2.79	.10	.01	.99	.24	.79	1.75	.19	.17	.85	.73	.51
M x Age	2.60	.11	.20	.66	.00	.95	.62	.56	.12	.73	.02	.86
M x SES	2.48	.12	4.08	.04	5.75	.02	.86	.64	3.38	.07	4.90	.03
M x Sex	2.43	.12	.09	.77	.00	.99	1.56	.21	.01	.92	.04	.85
Elaboration Ratio (E/T)												
M x Rd.	13.80	.0007	4.20	.04	2.06	.15	12.07	.002	3.08	.08	1.06	.31
M x B.O.	10.73	.002	2.74	.07	1.31	.28	10.15	.003	2.19	.12	.98	.61
M x Age	19.63	.0001	.71	.59	.04	.84	4.34	.04	.03	.87	.02	.91
M x SES	16.58	.0003	3.92	.05	6.30	.01	15.37	.0005	4.10	.05	3.03	.08
M x Sex	18.19	.0002	2.73	.10	.06	.80	14.75	.0006	1.56	.22	.00	.97

.B.--Analyses A based on classrooms 1 and 2 vs. 3
Analyses B based on classrooms 2 vs. 3

Table 5

N's and $\bar{X}$'s FOR SIGNIFICANT MAIN EFFECTS, TOTAL NUMBER OF ELABORATED UTTERANCES

	Analysis A		Analysis B	
	N	$\bar{X}$	N	$\bar{X}$
		SES		
Low	25	28.45	24	27.34
Middle	48	41.94	24	41.89
		Teacher Mediation		
Low	25	28.31	25	28.31
High	48	42.37	23	40.92

Table 6

N's and $\bar{X}$'s FOR SIGNIFICANT MAIN EFFECTS, TOTAL NUMBER OF UTTERANCES

	Analysis A		Analysis B	
	N	$\bar{X}$	N	$\bar{X}$
Low	25	48.15	24	46.14
Middle	48	62.97	24	60.85

Table 7

N's and $\bar{X}$'s FOR SIGNIFICANT MAIN EFFECTS, ELABORATION RATIO SCORES

	Analysis A		Analysis B	
	N	$\bar{X}$	N	$\bar{X}$
		Mediation[b]		
Low	25	.50	25	.52
High	50	.70	25	.71
		Reading Level		
Below Grade	37	.57	27	.58
On or Above Grade	38	.65	23	.66
		SES		
Low	25	.57	24	.57
Middle	48	.65	24	.67
		Sex[a]		
Female	Not enough data			
Male				

[a]Trend p .10 .05

[b]The Average Mediation Mean obtained from the 5 analyses is presented above. For the A Analyses, the low mediation range was .502-.5032, the high mediation range was .675-.710; for the B Analyses, the low mediation range was .502-.525, the high mediation range was .700-.715.

N.B. Analysis A based on Classrooms I and II vs. III.
Analysis B based on Classrooms II vs. III.

Table 8

N's and $\bar{X}$'s FOR SIGNIFICANT TM x X SES INTERACTIONS

SES Levels	A Analysis				B Analysis			
	Low Med.		High Med.		Low Med.		High Med.	
	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$
				Number of Elaborated Utterances				
Low	14	14.07	11	42.82	14	14.07	10	40.60
Middle	11	42.55	37	42.32	11	42.55	13	41.23
				Total Number of Utterances				
Low	14	33.57	11	62.73	14	33.57	10	58.70
Middle	11	66.00	37	59.95	11	66.00	13	55.69
				Elaboration Ratio				
Low	14	.43	11	.70	14	.43	10	.71
Middle	11	.62	37	.68	11	.62	13	.72

Table 9

SUMMARY RESULTS,
INTERACTION IN 3-WAY AV's

	Variables (A Analysis)							
	1		2		3		4	
	F	p	F	p	F	p	F	p
TM x SES x Sex	3.02	.08	4.19	.04	4.61	.03	.22	.65
TM x SES x Rd. Lev.	1.73	.19	1.35	.25	.26	.62	8.56	.005
TM x Age x Rd. Lev.	.56	.53	2.37	.12	1.35	.25	1.16	.28

N.B. Variable 1 Number of Elaborated Utterances
2 Number of Restricted Utterances
3 Total Number of Utterances
4 Elaborated Ratio

Table 10

$\underline{N}$'s x $\overline{X}$'s FOR SIGNIFICANT AND TREND INTERACTIONS

	Low Mediation		High Mediation	
	$\underline{N}$	$\overline{X}$	$\underline{N}$	$\overline{X}$
		Elaboration Ratio Score		
Below Grade	16	.46	11	.69
On or Above Grade	9	.60	14	.72
		TM x SES x Reading Level		
Low SES				
Below Grade	12	.38	8	.70
On Grade	2	.75	3	.72
Middle SES				
Below Grade	4	.71	12	.66
On Grade	7	.56	25	.69

TABLE 14

CORRELATIONS BETWEEN AMOUNT OF MEDIATION RECEIVED BY CHILD AND CHILD'S LANGUAGE SCORES

	High Med.	Low Med.	Med.
Raw Elab.	.43++	.10	.22*
Raw Rest.	.48++	.35++	-.10
Total # UNI			
EIT	-.06	.28+	.29*
SIT			

TABLE 15

INTERCORRELATIONS AMONG CHILD CHARACTERISTIC VARIABLES

	Sex	Rdg.	Age	SES	B.O.	# Sib.
Sex	--	-17	.3[illegible]++	-.28++	-.17	- .08
Rdg.		--	[illegible]	44++	13	07
Age			--	-26	02	02
SES				--	07	- 26
B.O.					--	03
# Sib.						--

INTERCORRELATIONS TABLE: 13 CHILD-TALK CATEGORIES AND CLASSROOM CONTEXT VARIABLES

CONTENTS	MEAN $\bar{X}$	S.D. δ	SEX	RDG	AGE	COL.	S.E.S.	BIRTH ORDER	# SIBLS	HIGH MED. CATS	LOW MED CATS	8A	8B	9A	9B	10A	10B	11A	11B	12	13A	13B	TOHR	RAW ELAB	RAW RESTR	% ELAB	MED SCORES	E RAT
TEACHER EXPECTATN	-.06	1.	-12	-30	16	14	25	25	-03	03	-50**	13	41	40*	-60*	30	37*	30	-16	-12	-28	14	12	43*	-11	43*	49**	37
SEX	-.52	.96		-17	31**	-33**	-23*	-17	-05	-16	20*	-16	-10	01	02	07	-06	-38**	-04	10	-20	-22	53**	-05	-07	03	-20*	07
READING	-.01	1.			06	36**	44**	13	07	-04	-32**	-03	32*	29*	34*	15	06	25	20	-29*	-15	08	-16	23*	-09	29**	36**	22
AGE	79.	8.				33**	-26	02	02	-20	-21	-17	-11	-10	11	15	05	14	-15	-20	04	-10	32**	04	-27**	22*	01	20
COLOR	.14	1.					75**	14	-13	15	-21	26*	39*	32**	-24	17	11	44**	34**	-14	-12	-41	56**	35**	16	23*	31**	13
S.E.S.	.32	.96						07	-26	05	-23	24*	26	17	-15	32**	09	22	10	-19	-24	-09	-45**	34**	-00	33**	28**	24
BIRTH ORDER	1.8	.86							03	08	-27*	10	12	07	19	10	09	16	-01	-25*	20	-27	-16	10	-07	10	37**	02
# SIBLINGS	2.2	1.1								-24	-23	-28**	-10	02	22	-24	-24	17	08	04	29	25	-03	-20	02	-17	05	-28
HIGH MEDIATING CATEG'S	18.	13.									40**	40**	14	16	13	26*	53**	19	27	15**	-13	-05	-10	43**	48**	-06	01	-01
LOW MEDIATING CATEG'S	9.4	8.6										06	10	-11	25	08	14	-19	05	50**	-10	13	22	10	35**	23*	-70**	-2
8A	8.5	5.5											41*	40**	13	43**	38**	29*	31*	16	15	04	-33**	73**	48**	27*	17	19
8B	3.7	3.4												43**	10	45**	07	37*	33*	05	-16	-41	-20	58**	27	17	17	17
9A	7.5	5.7													02	44**	22	34**	41**	-07	49**	15	14	28	24	13	-06	02
9B	4.4	3.0														13	07	02	-29	16	40**	15	14	28	24	13	-06	02
10A	9.1	6.3															25*	16	38**	13	18	-36	04	75**	24*	41**	12	21
10B	12.	8.3																-01	-14	-02	-01	-14	-02	67**	44**	29**	03	21
11A	4.2	3.2																	33*	-03	-01	-48**	-27*	37**	40**	04	28*	11
11B	3.8	3.4																		04	-20	-23	-37**	43**	43**	-05	09	-01
12	11.4	9.2																			-09	-16	-11**	07	73**	-60**	-12**	-53
13A	3.5	3.7																				23	-03	06	33**	-23	09	-25
13B	3.2	2.2																					-02	-16	04	-07	-04	-21
TEACHER	2.	.82																						29**	00	-36**	-26*	21
RAW ELABS	38.	23.																							46**	53**	22*	45
RAW RESTRICTED	20.	11.																								-41**	-10	-43
ELABORATN SCORES	.63	.17																									29*	03
MEDIATION SCORES	.72	.17																										17
E RATIO	2.3	1.4																										

** = .01
* = .05

RAW DATA TEACHER TALK

Table. Teacher by High Mediating Statements - Group (1:1)

	Mediating Categories					
Teacher	1	2A	2B	3	4A	Totals
1	1	8	12	20	18	59
2	0	2	0	5	3	10
3	0	0	0	0	0	0
Totals	1	10	12	25	21	-

Table. Teacher by High Mediating Statements - Group ≤5

	Mediating Categories					
Teacher	1	2A	2B	3	4A	Totals
1	7	8	0	10	2	27
2	0	1	0	11	3	15
3	0	0	1	5	6	12
Totals	7	9	1	26	11	-

Table. Teacher by High Mediating Statements - Group ≤10

	Mediating Categories					
Teacher	1	2A	2B	3	4A	Totals
1	4	5	0	17	14	40
2	11	8	0	15	23	57
3	8	21	27	24	9	89
Totals	23	34	27	56	46	-

Table. Teacher by High Mediating Statements - Group (Whole Class)

	Mediating Categories					
Teacher	1	2A	2B	3	4A	Totals
1	3	7	3	47	30	90
2	9	8	1	21	42	81
3	8	9	1	8	2	28
Totals	20	24	5	76	74	-

Table. Teacher by Low Mediating Statements - Group (1:1)

	Non-Mediating Categories					
Teacher	4B	5A	5B	6A	6B	Totals
1	2	1	0	0	0	3
2	1	0	1	2	0	4
3	0	0	0	0	0	0
Totals	3	1	1	2	0	-

Table. Teacher by High-Mediating Categories by Curriculum Area (Unstruct. Play)

Teacher	1	2A	2B	3	4A	Totals
1	4	7	0	19	16	46
2	0	0	0	5	1	6
3	0	2	0	7	5	14
Totals	4	9	0	31	22	-

Table. Teacher by High-Mediating Categories by Curriculum Area (Group Meetings)

Teacher	1	2A	2B	3	4A	Totals
1	3	7	3	47	30	90
2	13	4	2	17	16	52
3	8	9	1	8	2	28
Totals	24	20	6	72	48	-

Table. Teacher by Low-Mediating Categories by Curriculum Area (Academic)

Teacher	4B	5A	5B	6A	6B	Totals
1	2	1	0	0	0	3
2	3	8	3	2	0	16
3	0	2	8	0	0	10
Totals	5	11	11	2	0	-

Table. Teacher by Low-Mediating Categories by Curriculum Area (Expressive Arts)

Teacher	4B	5A	5B	6A	6B	Totals
1	1	9	0	0	0	10
2	21	21	11	2	2	57
3	7	39	19	20	4	89
Totals	29	69	30	22	6	-

Table. Teacher by Low-Mediating Categories by Curriculum Area (Unstruct. Play)

Teacher	4B	5A	5B	6A	6B	Totals
1	1	2	1	4	2	10
2	0	3	0	2	0	5
3	8	7	14	1	1	31
Totals	9	12	15	7	3	-

Table. Teacher by Low-Mediating Categories by Curriculum Area (Group Meetings)

Teacher	4B	5A	5B	6A	6B	Totals
1	10	12	0	0	0	22
2	11	7	21	7	3	49
3	3	6	9	4	0	22
Totals	24	25	30	11	3	-